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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/538,941	03/31/2000	Hans-Detlef Luginsland	PM 258030/99003250	9776

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EXAMINER

LEE, RIP A

ART UNIT

PAPER NUMBER

1713

DATE MAILED: 02/05/2003

12

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Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action

Application No.

09/538,941

Applicant(s)

LUGINSLAND, HANS-DETLEF

Examiner

Rip A. Lee

Art Unit

1713

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED January 13, 2003 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

PERIOD FOR REPLY [check either a) or b)]

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.
- b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.
- ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on _____. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☒ The proposed amendment(s) will not be entered because:
- (a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);
- (b) ☐ they raise the issue of new matter (see Note below);
- (c) ☒ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
- (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____

3. ☐ Applicant's reply has overcome the following rejection(s): _____.
4. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☐ The a) ☐ affidavit, b) ☐ exhibit, or c) ☐ request for reconsideration has been considered but does NOT place the application in condition for allowance because: _____.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☒ For purposes of Appeal, the proposed amendment(s) a) ☒ will not be entered or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: _____.

Claim(s) objected to: _____.

Claim(s) rejected: 1-20.

Claim(s) withdrawn from consideration: _____.

8. ☐ The proposed drawing correction filed on _____ is a) ☐ approved or b) ☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____.
10. ☒ Other: PTO-892 and Attachment to advisory action



DAVID W. WU

SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700

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Attachment to Advisory Action

This advisory action follows an after-final response filed on January 13, 2003.

1. The Applicants traverse of the rejection of claims 1-8 and 15-17 under 35 U.S.C. 102(b) as being unpatentable over U.S. Patent No. 5,159,009 to Wolff *et al.* The following main points were expressed:

(i) Wolff *et al.* does not anticipate the subject matter of the present claims which recite free organosilane or organosilane supported on a carrier. In contrast, the prior art discloses carbon black modified by organosilane. As such, the organosilane of formula (I) is no longer present because it has reacted with the carbon black.

Claim 15 is drawn to a rubber mixture comprising an organosilane, and Wolff *et al.* teaches such a mixture. Claim 15 is not drawn to a process of making the composition. Therefore, how the organosilane enters the composition is not relevant. Furthermore, claim 15 merely states that organosilane is mixed into the composition. It does not address any ensuing physicochemical process or outcome of the organosilane once it is placed into the mixture.

Addressing the Applicant's commentary, the identity of the organosilane is more likely to change in the rubber mixture of the present invention due to reaction of functional groups of the coupling agent with silanol groups. In contrast, the identity of the organosilane is more likely to remain unchanged in the prior art since interaction of coupling agent with carbon black is an adsorptive phenomenon. Therefore, carbon black is a suitable "carrier" for the organosilane coupling agent.

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(ii) Assuming the examiner's equating silicic acid with silica is correct, Wolff *et al.* merely discloses silica as a filler, not as a carrier or support for the organosilane. Only carbon black is disclosed as a carrier or support for organosilane.

The role of silica in rubber compositions is variegated – it has even been used as pigment. Whether it is a reinforcing filler or a means by which silane is introduced into the composition (*i.e.*, a carrier or support) is a matter of nomenclature. Logomachy notwithstanding, Wolff *et al.* does teaches use of silica as a component of the composition. It is noted that the Applicants contradict their previous argument by stating, "Only carbon black is disclosed as a carrier or support for organosilane."

(iii) The Applicant's disagree with the examiner's equating silicic acid with silica, implying that Wolff *et al.* would not anticipate the present claims. The Applicants request the examiner to provide evidence to support the assertion of equivalency between silica and silicic acid.

DE 199 15 281, to which the current application claims foreign priority describes use of "Kieselsäure," which is, indeed, translated as "silicic acid." However, Kieselsäure also refers to "silica," as shown in Cassell's German Dictionary (see attached).

Realizing that the translation may be the source of the misunderstanding, the examiner turned to the specifications for guidance. Here, the present inventors disclose use of Ultrasil VN3 GR. As shown in the two bulletins from Stochem and RT Vanderbilt, Co., Inc., (see attached), Ultrasil is a registered trademark of Degussa Corp. for a product line of precipitated silicas. In particular, Ultrasil VN3 GR is a granulated precipitated silica.

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That silicic acid and silica are two are chemically distinct species, is irrefutable, and this fact was acknowledged in the previous office action. However, in context of the art of rubber compositions, it was submitted that the skilled artisan would view "silicic acid" and "silica" as synonymous terms. This notion is maintained in light of the evidence provided above.

(iv) Wolff *et al.* illustrates the use of trialkoxysilanes in the examples, and consequently, one would not find it obvious to arrive at the monoalkoxysilanes of the present invention. That is, the instant class of compounds of structural formula (I) would not be "at once envisaged" from the structural formula given in Wolff *et al.*

The examiner respectfully disagrees with the Applicants because the general formula of the prior art clearly allows for the use of organosilanes having alkyl and alkoxy substituents, viz., $[R^1_n(RO)_{3-n}Si(Alk)_m(Ar)_p]_q[B]$, where group B represents $-SCN$, $-SH$, $-Cl$, or $-S_x-$ if $q = 2$. The skilled artisan would "at once envisage" such an embodiment because substituents R and RO are clearly indicated in the formula.

In contrast, the organosilanes of the present invention would not be "at once envisaged" in a general formula $R^1R^2R^3Si-R^4-Z$ where R^1 , R^2 , and R^3 could be any one of H, alkyl, alkoxy, or halogen.

(v) Regarding present claim 4, the Applicants note that there is no disclosure of a mixture of organopolysulfane and organoalkylsilane in Wolff *et al.* However, the prior art teaches compositions containing *at least one* of the disclosed organosilane compounds. This provision includes compositions containing more than one organosilane.

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In the final analysis, the present claim is drawn simply to a composition comprising rubber and an organosilane of formula (I), $R^1R^2R^3Si-R^4-Z$, where R^1 , R^2 , R^3 are H, C₁-C₄ alkyl, C₁-C₄ alkoxy or halogen wherein the number of alkyl groups is ≥ 1 , R^4 is C₁-C₁₈ divalent hydrocarbon group, Z is halogen, SCN, SH or $S_x-R^4-SiR^1R^2R^3$ where x is 2 to 10, and this claim is anticipated by Wolff *et al.* In view of the discussions above the rejections of record have not been withdrawn.

2. Consequently, the proposed amendment of claim 15 and specifications, filed on January 13, 2002, have not been entered.

3. The Applicants also traverse of the rejection of claims 9-14 and 18-20 under 35 U.S.C. 103(a) as being unpatentable over Wolff *et al.* in view of U.S. Patent No. 6,008,295 to Takeichi *et al.* - The rejection of record has not been withdrawn in view of the discussion above. It is maintained that the skilled artisan would find it obvious to use the rubber composition to make a tire or tire tread based on the collective teachings of the prior art.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rip A. Lee whose telephone number is (703)306-0094. The examiner can be reached on Monday through Friday from 9:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached at (703)308-2450. The fax phone number for the organization where this application or proceeding is assigned is (703)746-7064. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0661.

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January 31, 2003